

Platalea leucorodia (B.). Only one seen, which was shot 10th June and proved to be a female, so that they probably breed on the island.

Ibis falcinellus (B.). Two or three seen the latter part of April.

Numenius arquatus (B.). Two or three seen the latter part of April.

Tringa minuta (B.). Very common the latter part of April; none seen after the 15th May.

Machetes pugnax (B.).

Totanus calidris (B.).

———— *ochropus* (B.).

———— *hypoleucos* (B.).

———— *glottis* (B.).

} Very common the latter part of April; none seen after the 15th May.

Scolopax major (B.).

———— *gallinago* (B.).

} A good number were seen the latter part of April, when six couple were shot one day; none seen afterwards.

Gallinula porzana (B.). Common: breeds.

———— *pusilla* (B.). Common end of April; none seen afterwards.

———— *chloropus* (B.). One or two only seen.

Sterna hirundo (B.). One only, 18th June.

———— *nigra* (B.). Common: breeds.

Larus argentatus (B.). Very common: breeds.

———— *melanocephalus*. One only, 28th April.

Puffinus cinereus. A few seen on the coast, middle of June.

———— *anglorum* (B.). Common: breeds.

Thalassidroma pelagica (B.). Several were seen off the island on 19th June.

Anas querquedula (B.). A few seen in pairs as late as middle of June.

———— *nyroca* (B.). A few seen in pairs as late as middle of May.

Pelecanus onocrotalus. One seen beginning of May; probably common in winter.

Carbo cormoranus (B.). Common: breeds.

Summary.

	Species
Common to Crete and Britain. . . .	84
Doubtful if same as British species	2
European but not British.	19

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All the birds in this list have been noticed also in the Ionian Islands, except the four following:—*Accentor alpinus*, *Anthus richardi*, *Fringilla cisalpina*, and *Platalea leucorodia*.—H. E. S.

LIII.—*Excerpta Zoologica, or abridged Extracts from Foreign Journals.* By Dr. FELIX VON BÄRENSPRUNG.

Vegetation upon Living Animals.

WITHIN the last few years several observations have been made on certain of the lower classes of vegetable productions, the parasitical occurrence of which on living animals gives

rise to various diseases. Among the most complete researches on this subject are those of Bassi and Audouin on the *Muscadina*, a contagious disease of the silkworm (Ann. des Sc. Nat. 1837, 1838), and those of Schœnlein on the contagious ringworm (*Porrigo lupinosa*) of man. From these inquiries our views respecting miasma and contagion have obtained considerable elucidation, as it was possible in those cases to isolate the contagious matters and to determine their vegetable nature. A third fact also of this class, viz. the occurrence of parasitic fungoid formations in the lungs and in the air-cells of birds, has been observed by Montagu and Owen (see 'Annals,' vol. ix. p. 131, and vol. viii. p. 230) and more recently by Müller and Retzius, as has already been communicated in these 'Annals' for 1842. Connected with these observations are the following, which have been more recently published.

Dr. Hanover and M. Stilling have published several communications on contagious confervoid formations on frogs and on the water salamander (Müll. Archiv, 1839, p. 338; 1841, p. 279; and 1842, p. 73). Dr. Hanover first observed a mucous efflorescence form on *Triton punctata* which had been used for dissection and had lain some time in water; on submitting this efflorescence to microscopic examination, it proved to consist of a very simple conferva. The mass was formed of numerous more or less ramified tubes of various diameter which attained the length of an inch. The cavity in their interior was in some continuous, in others distinctly divided into chambers by means of cellular partitions; it was filled with innumerable black corpuscles, which swam about in the interior in a very lively manner and with an appearance of volition. The motions induced M. Stilling to ascribe an animal and not a vegetable nature to the efflorescence. He considered the black corpuscles to be the eggs of a species of hair-shaped infusorium which became developed in great quantity during putrefaction, and believed that these eggs were transported by the circulation of the blood and were thus deposited at certain places, where he then supposed the tubes to be formed by a secretion of fibrine, and which were, so to speak, polypidoms (*Keimstöcke*) in which the eggs attained their development.

Dr. Hanover proved the incorrectness of this view in his second paper on the subject, and placed beyond doubt the vegetable nature of the efflorescence by the observation of its development and the formation of sporules*.

* The free and apparently voluntary motion of the sporules of many algæ, fungi and lichens has already been observed so often, that it can no longer be classed among the surprising phænomena. Very recently Prof. Gæppert in Breslau has described it in *Nemasporea incarnata*, and has shown

What is most interesting in these efflorescences is, that they not only grow on the bodies of dead animals, but may also be transferred to those of living ones. If, for instance, a living animal which was wounded in any part of its body happened to be contiguous, it was also attacked by them, and the conferva vegetated from the wound in luxuriance, deriving its nourishment at the expense of the animal, which fell off perceptibly in condition and sometimes died. Moreover, direct attempts at inoculation proved successful; for a small quantity of conferva conveyed into a cuticular wound vegetated abundantly, and after some time fell off together with a portion of the skin.

These experiments were made by Dr. Hanover, and were subsequently confirmed by M. Stilling. They show that we have here to do with a true vegetable contagium, similar to that of the *Porrigo lupinosa* and the *Muscadina*, but with this difference, that in the one case the air is the diffusing medium, while in the other it is the water.

The conferva itself has been called *Achlya prolifera*.

Another contribution to the history of these parasitical vegetable formations was adduced by Dr. Hanover in Müll. Arch. 1842, p. 281, “on *Entophyta* upon the mucous membranes of the dead and living human body.”

The little plant here described has the greatest similarity to the mucedinous fungus of the *Porrigo lupinosa*, since it consists of the same simple or ramified tubes; but it appears only to increase by division; as sporules, such as they occur in *Porr. lupinosa*, were never observed. This fungus differs from most of the parasitical plants that have hitherto been observed, from its not growing upon the surface but in the interior of the body, viz. upon the mucous membrane of the cavity of the mouth and alimentary canals of man. Among seventy bodies which had died of the most varied diseases it was found in fourteen, most frequently after *typhus abdominalis*, where Langenbeck had already observed something of a similar nature. After the occurrence of this filamentoid fungus in the dead body had been confirmed, it was likewise found in the living; it was met with in the various sedimentary deposits on the tongue and lips in *typhus**, in *erysipelas*, and in the stomach

that even specimens of this plant that had been collected twenty years ago still exhibited the same motion of their sporules (Müll. Arch. 1842, p. 145). The motion of the spermatozoa is in fact quite a similar phænomenon, and the view that they are independent living animals can scarcely be maintained any longer since their origin from cells has been repeatedly proved, especially by R. Wagner and by M. Kölliker.

* The tartar deposited in health about the teeth consists in great part of a fine filamentous fungus, according to some authors; but Prof. Mitscherlich and M. Mandl, prove it to consist of an infusorium.—Ed.

both in new-born children and in adults. It has also been once detected in the flocculent sediments of diabetic urine.

This filamentoid fungus is frequently accompanied by the fermentative fungus of the yeast (*Coniomyces cerevisiæ*), and also by the peculiar fermentative fungus of diabetic urine. Both have also been observed in dead and living persons.

In diabetic urine which was undergoing fermentation, a fermentative fungus was also developed, which however was found to be specifically distinct from that of the yeast, the individual cells being more elongate, and containing generally from two to three nuclei. When yeast is added to fresh diabetic urine it likewise undergoes fermentation, but only the fermentative fungus of the yeast is then evolved, not that of the diabetes.

The great resemblance between the fermentative and some forms of the filamentoid fungi, their contemporaneous appearance, and especially their occurrence in the living body, point to a remarkable analogy between the process of fermentation and several forms of disease, especially those produced by contagion,—an analogy which has already been established by Liebig in a chemical point of view*.

Dr. Hanover has endeavoured to collect together the scattered literature on the occurrence of parasitic plants upon living animals †, whence it results that this phænomenon may occur in all classes of animals. They have been observed,—

1. *In Man*.—The vegetable nature of the *Porrigio lupinosa* was first shown by Schœnlein and was then confirmed by various persons; thus recently in *Tinea favosa* by Dr. Gruby, Müll. Arch. 1842. Hanover observed the filamentoid fungus of the mucous membrane, and at the same time Bennet (Trans. of the Roy. Soc. Edinb.) has detected a filamentoid fungus in the sputa and lungs of a man. J. Goodsir has described a vegetable (*Sarcina*) occurring in the stomach of persons affected by water-brash. Mr. Busk has published some notes on the same (Microscopic Journal).

2. *In Mammalia*.—Serrurier and Rousseau, l'Institut, 1841.

3. *In Birds*.—Fungoid formations in the lungs and air-cavities of birds have been observed by Mr. Owen in *Phanicopterus ruber*, Phil.

* This view has received considerable confirmation from the recent observations of the celebrated chemist Prof. Mitscherlich, communicated at p. 300 of this Journal; and also by the curious observations of M. Blondlot, published in the 'Comptes Rendus' for Sept. 11, 1843.—W. F.

† This has been admirably done by Dr. J. H. Bennett in an elaborate memoir published in the Transactions of the Royal Society of Edinburgh, vol. xv. part 2. The conclusions however drawn from the facts stated in the present article relative to the important offices which these remarkable productions are intended to fulfill in nature, will be found to be somewhat different, and well justify the publication of this paper, which was received from our friend seven months ago.—W. F.

Mag. 1833 ; Deslongchamps in *Anas mollissima*, Ann. des Sci. Nat. 1841 ; Serrurier and Rousseau in several other birds ; Johannes Müller and Retzius in *Falco rufus* and in *Strix nyctea*, 1842, Müll. Arch. 1842.

4. *In Amphibia*.—Serrurier and Rousseau in *Testudo Indica* ; Hannover and Stilling in salamanders and frogs.

5. *In Fish*.—Ehrenberg observed a conferva (*Tremella meteorica*) as a disease upon *Salmo eperlanus* ; Bennet a conferva upon *Cyprinus auratus*, Ann. Nat. Hist. vol. ix. p. 66.

6. *In Insects*.—Under this head come the observations of Bassi and Audouin on the Muscadina of the silkworm.

Sphæria sinensis grows upon a caterpillar in China, and is there employed as a medicine : Westwood in Annals of Nat. Hist. 1841*.

Hygrochrosis intestinalis has been detected in the intestinal canal of *Blatta* by Valentin (Repertorium, 1836).

The confervoid vegetation on flies has been frequently observed and described in particular by Ledermüller, Wrisberg, Spallanzani, O. F. Müller, Lyngbye, Gruithuisen, Carus, Gœthe, Meyen, and Nees von Esenbeck.

Achlya prolifera, of the water salamander, has also been found to infest the bodies of dead flies.

7. *In Mollusca*.—Laurent (l'Institut, 1839) has observed a fungus in the eggs of *Limax agrestis*.

COLEOPTERA.

The genus *Byrrhus* has been monographed by Steffani (Tentamen Monographiæ Byrrhorum, dissertatio inaug. Berol. 1842). The author describes thirty-five species, of which eight are new, arranged in five genera, among which one is new.

With regard to the geographical distribution of these insects, it is found that they all inhabit only the northern temperate zone, in which they are distributed as follows :—

	Number of species.	Europe.	America.	Asia.
<i>Byrrhus</i>	27	23	5	2
<i>Syncalypta</i>	3	3	0	0
<i>Podiloptorus</i>	1	1	0	0
<i>Simplocaria</i>	2	2	0	0
<i>Amphicyrta</i>	2	0	2	0
Genera and species. .	35	29	7	2

There are four species which belong exclusively to Europe, five to North America, and one to Asia.

An accurate description of the larva of *Byrrhus* has recently been given by Erichson in his 'Archiv,' vol. i. for 1842, p.104.

* See a paper in Hooker's 'London Journal of Botany' on the species of *Sphæria* which grow on larvæ and pupæ.—Ed.

CHÆTOPODES.

Several additions have been made to the history of the *Chætopodes*, Burm. (*Terricolæ*, Cuv.). Henle described several years ago a new genus allied to *Lumbricus*, to which he applied the name of *Enchytracus*; it occurs near Berlin in moist ground, and differs from *Lumbricus* by the white colour of the skin, the pale colour of the blood, and by its much smaller size.

In a treatise lately published by Hoffmeister (*De Vermibus quibusdam ad genus Lumbricorum pertinentibus*, diss. inaug. cum tab. 2. Berol. 1842), we are made acquainted with another new genus, *Sænuris*: the animal lives at the bottom of small ditches near Berlin, where it occurs buried in the mud with the posterior extremity of the body, while the front portion projects freely and floats about in the water. From this aquatic mode of life it approaches to the genus *Tubifex*, Lam., from which however it decidedly differs by its far greater size, four series of fasciculi (*Tubifex* has only two), and by the absence of the peculiarity of forming tubes in the mud. The following are the generic characters:—

Sænuris. Corpus teres, distincte annulatum annulis raris, quadrifariam ternis ad senis pedicellis inæqualibus aculeatum, numerus annulorum 190—160. Diaphragmata arcta; color sanguinis ruberrimus. Ventriculus musculosus nullus.

S. variegata. Labro superiore dilatato, antice acuminato. Long. 3^{'''}.

Lumbricus variegatus of O. Mueller is probably synonymous with this species. A careful anatomical dissection indicated essential differences from the allied genera.

In the same memoir we further find observations on the genus *Lumbricus* itself: while all the older zoologists are only acquainted with a single species, *Lumbricus terrestris*, Savigny (*Déscrip. de l'Égypte*) has made twenty new species from that one; and Dugés has brought the number up to thirty-five.

Hoffmeister, who examined the earthworms of the neighbourhood of Berlin, considers that he is able to distinguish with certainty three species which are characterized by external characters, and also by their habit. One of these species agrees with the *L. anatomicus*, Dug.; the other two are new, *L. agricola* and *L. olidus*.

C. Vogt has recently described another new genus, which is more allied to the Naiads (Müller's Archiv, 1841, p. 36), under the name *Matzia heterodactyla*. The long body of the animal is indistinctly divided into rings; each of the rings has on the ventral side two warts, each of which is furnished with from two to ten bristles. The animal is, from its parasitic habit, very remarkable, living as it does in the mantle-cavity of *Anchylys fluviatilis*; the length of the animal amounts at the

furthest to $1\frac{1}{2}'''$. Although Vogt describes this annelide as new, it appears to be identical with *Chætogaster*, Von Baer (Beiträge zur Kenntniss der niederen Thiere, tab. 2.). Von Baer also found his *Chætogaster* parasitic on freshwater mollusca; not on *Ancylus* it is true, but on *Limnæus*, *Planorbis*, and *Physa*. In size, colour and form it agrees perfectly with the *Matzia*, and from the description and figure there cannot be the slightest doubt as to the identity of both animals. I have also found in the neighbourhood of Berlin, in the mantle-cavity of young specimens of *Planorbis communis*, an annelide which agrees exactly with Vogt's representation of the *Matzia heterodactyla*. The latter name must be abandoned, and that of *Chætogaster*, being the oldest, adopted.

With respect to the more accurate relations of affinity of this genus, the spiny feet affixed to the flesh-hooks, and the mode of propagation by means of gemmation and division, connect it with the *Naiades*, from which however it differs in the absence of eyes. It is most nearly allied to *Acleosoma* and *Pristina*, Ehrenb. (Symbol. Phys. Evert.).

BIBLIOGRAPHICAL NOTICES.

Annales des Sciences Naturelles.

Feb. 1843.—*Zoology*.—The remainder of M. Joly's very valuable paper on *Caridina Desmarestii*. Among the results of his research are the following important conclusions: the *Caridina* quits the egg under a different form from that which it presents when adult, wanting many organs which afterwards are fully developed. The changes which it undergoes are *true metamorphoses*, much more complete metamorphoses than those presented by Orthopterous, Hemipterous, and some Neuropterous insects. A comparison of M. Joly's observations with those of J. V. Thompson and Capt. Du Cane leads him to conclude, that almost all, if not all, Decapodous Crustacea exhibit similar transformations.—Dr. Martins on *Arvicola nivalis*, a new species from the region of perpetual snow in the Swiss Alps.—Andral and Gavaret on Respiration.—A translation of Mr. Bowman's admirable memoir on the structure and use of the Malpighian bodies of the kidneys.

Botany.—Dr. Montagne's descriptions of Exotic *Cellulares*, continued.—M. Nageli on Fungi living in the interior of vegetable cells (from the 'Linnæa'), with a good plate.—Professor Morren on the movements and anatomy of the labellum of *Megaclinium falcatum* (extracted from the 15th vol. of the new memoirs of the Brussels Academy).—Spach's monograph of the genus *Amygdalus*. Out of seventeen species thirteen are inhabitants of Asia only, one of Europe only, one common to Europe and Asia, and two doubtful. Nine of these are new. M. Spach also enumerates seven dubious species.

March.—*Zoology*.—M. Leon Dufour on the Liver of Insects. A long and important paper with excellent plates.—M. Quatrefages